

REMARKS

In the May 20, 2003 Office Action, of pending claims 1-15, 17-22 and 23-35, claims 9, 10, 12, 13, 21, 23, 25-27, 33 and 34 are rejected under 35 U.S.C. §112, second paragraph and claims 1-15, 17-22 and 23-35 are rejected under 35 U.S.C. §103(a).

By this Amendment, claim 25 is canceled and claims 24 and 26 are amended, leaving claims 1-15, 17-21, 23, 24 and 26-35 pending with claims 1, 20, 24 and 31 being independent.

Reconsideration and allowance of the above-identified application are respectfully requested.

Rejections Under 35 U.S.C. §112, second paragraph

Claims 9, 10, 12, 13, 21, 23, 25-27, 33 and 34 are rejected under 35 U.S.C. §112, second paragraph as being indefinite. Specifically, the Examiner contends that claim 25 recites no structure. The Examiner also contends that in claim 27 it is unclear what further structure of the laser is to be inferred by reciting the particular portion of the corneal surface the laser is to act on, and that claims 9, 10, 12, 13, 21, 23, 33 and 34 merely recite the use of a particular structure, and do not further define the manipulative aspect of the method.

With regard to dependent claim 25, it has been canceled and therefore this rejection no longer applies.

With regard to dependent claim 27, the recitation of use of a particular structure is sufficient to further define the invention. Functional language does not in and of itself, render a claim improper. See MPEP §2173.05(g) citing In re Swinehart, 439 F.2d 210 (CCPA 1971). It

has been held that functional language to define an invention is perfectly acceptable because if it sets definite boundaries on the protection sought. In re Barr, 444 F.2d 588 (CCPA 1971).

Furthermore, if the functional language serves to precisely define present structural attributes of the claimed assembly, then the functional limitation complies with 35 U.S.C. §112, second paragraph. MPEP §2173.059(g) citing In re Venezia, 530 F.2d 956 (CCPA 1976).

Applicant submits that by defining the function of the laser in this claim, not only would one skilled in the art know precisely what structural attributes would be required, but also that it is clear what boundaries of protection are sought. Therefore, Applicant submits that dependent claim 27 is definite.

With respect to claims 9, 10, 12, 13, 21, 23, 33 and 34, Applicant submits that each of these claims further defines the method by limiting each specific step. For example, claim 9 recites that the introducing ocular material step includes introducing a lens. 37 CFR §1.75(c) merely states that a claim may be presented in dependent form, referring back to and further limiting another claim or claims in the same application. The type of language recited in claim 9 clearly further defines the method step by limiting how to perform the step. Additionally, Applicant submits that one of ordinary skill in the art would understand that the method was limited to being performed with a specific device or using a specific structure for each respective claim. For example, in claim 9, one of ordinary skill in the art would certainly understand that the method of claim 9 would be performed by introducing a lens. Applicant believes that each of these claims is further limiting and that one of ordinary skill in the relevant art would be able to determine what Applicant regards as the invention.

Applicant therefore submits that claims 9, 10, 12, 13, 21, 23, 25-27, 33 and 34 are definite and respectfully requests that §112, second paragraph, rejections be withdrawn.

Rejections Under 35 U.S.C. §103(a)

Claims 1-4, 7-13 and 17-19, 31, 34 and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,907,586 to Bille et al. in view of the combination of U.S. Patent No. 5,090,955 to Simon and U.S. Patent No. 3,776,230 to Neefe. This rejection is respectfully transversed.

Independent Claim 1

The combination of the Bille, Simon and Neefe patents does not disclose, teach or suggest all the elements of amended independent claim 1.

The Bille et al. patent discloses internally ablating a portion of the cornea to form a region 52. The Simon patent teaches inserting a gel 34 into an annular chamber 30 in the cornea. Additionally, the Examiner alleges that the Neefe patent teaches using a mold to reshape the cornea. In support of this rejection, the Examiner alleges that it would have been obvious to employ a mold to the combination of the Bille and the Simon patents, since it would be more precise and less cumbersome than the manual massage disclosed in the Simon patent.

However, none of the cited patents actually discloses, teaches or suggests using a contact lens or mold to reshape ocular material that is inserted under the cornea or provides motivation to do so. At best, the Neefe patent discloses molding the exterior surface of the cornea, it does not disclose, teach or suggest reshaping ocular material under the surface of the cornea. Additionally, the Neefe patent teaches applying heat to soften the cornea, and then reshaping the softened

cornea. None of the cited references actually teaches any type of external device to change the shape of an ocular material.

The Examiner contends that using the Neeffe mold would be more precise and less cumbersome than the manual massage method for the removal of excess gel used in the Simon patent. Applicant submits that this motivation is not supplied in any of the cited prior art and is merely the opinion of the Examiner. Not only is there no teaching or suggestion in the prior art that using the Neeffe mold is preferable over the manual massage method, but there is no teaching or suggestion in the prior art that the Neeffe mold would even work to remove excess gel.

Additionally, the prior art must teach or suggest every element recited in the claims. See MPEP §2143.03. Applicant submits that the contact lens recited in independent claim 1 has a predetermined curvature and is used to shape the ocular material, not merely to remove excess gel. There is clearly no teaching in the cited prior art that the Neeffe mold could be used to mold ocular material that has been inserted under a corneal surface.

Any finding that the Neeffe mold could be used as recited in independent claim 1 could only be reached by using the benefits of the present invention as motivation to combine these references, and not any motivation or suggestion taught or suggested in the prior art. Applicant submits that this would be an improper hindsight reconstruction.

Therefore, Applicant submits that independent claim 1, and its respective dependent claims 2-15 and 17-19 are allowable over the cited prior art.

Independent claim 31

Independent claim 31 recites subject matter that is substantially similar to independent claim 1. Specifically, claim 31 recites placing a contact lens having a predetermined curvature on the surface of the cornea to shape an ocular gel, therefore independent claim 31, and its respective dependent claim 32-35 are allowable for the reasons stated above.

Claims 1, 4-6, 14, 15 and 31-33 stand rejected under 35 U.S.C. §103(a) over the Bille patent in combination with the Simon and Neefe patents and further in view of U.S. Patent No. 4,665,913 to L'Esperance, Jr.

With regard to each of these claims, Applicant submits that they are allowable for the reasons stated above, since the L'Esperance patent does not overcome the deficiencies of the Bille, Simon and Neefe patents.

Moreover, each dependent claim recites additional elements that further distinguish them from the prior art. For example, claim 6 recites firing a second laser at a portion of the cornea overlying and located at the main optical axis. This is clearly not disclosed in the prior art.

Claims 20, 21 and 23 stand rejected under 35 U.S.C. §109(a) as being unpatentable over the Bille patent in combination with the Neefe, L'Esperance and Simon patents.

Independent claim 20

Applicant submits that this combination of references does not disclose, teach or suggest the method recited in independent claim 20. Specifically, this combination does not disclose,

teach or suggest *using a laser* to separate the internal area of the cornea offset from the main optical axis into first and second *substantially ring-shaped* internal surfaces to form a corneal pocket and using a laser to ablate a portion of the cornea *overlying the portion* of the first surface that remains *attached* to the second surface by the area *located at the main optical axis*.

By forming a substantially ring-shaped corneal pocket offset from the main optical axis, the curvature of the eye can be changed without the portion of the eye along the main optical axis being disturbed. This results in a less likelihood that the healing of the cornea will result in halos or other vision impairments.

At best, the prior art teaches forming a pocket in the cornea in the Bille patent, inserting a material under the surface of the cornea in the Simon patent, and ablating the entire surface of the cornea to reduce a myopic or hyperopic condition in the L'Esperance patent. There is no disclosure or teaching in the cited prior art of using a laser to form a substantially ring-shaped pocket offset from the main optical axis.

The Examiner relies on the Bille patent to teach the formation of the pocket via a laser. However, there is no teaching or suggestion in the Bille patent that the laser described therein could form a pocket other than that allegedly shown in Fig. 5, let alone a substantially ring-shaped pocket, as recited in independent claim 20.

Thus, Applicant submits that claim 20 and its respective dependent claims 21 and 23 are allowable.

Claims 24-30 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Bille et al. patent in combination with the Simon and the L'Esperance patents.

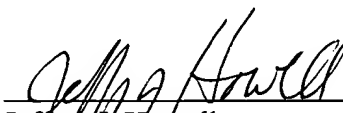
Independent Claim 24

Amended independent claim 24 recites subject matter that is substantially similar to independent claim 20. Specifically, claim 24 recites separating the internal area of the cornea offset from the main optical axis, so that a portion of the first surface remains attached to the second surface by an area located at the main optical axis. Therefore independent claim 24, and its respective dependent claims 26-30, are allowable for the reasons stated above.

* * *

In view of the foregoing, claims 1-15, 17-21, 23, 24 and 26-35 are allowable, and notice to this effect is respectfully requested. Should the Examiner have any questions, he is invited to contact the undersigned at the number indicated.

Respectfully submitted,



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